

## THIN SEMICONDUCTOR PACKAGE INCLUDING STACKED DIES

Lee John Smith and David Albert Zoba

## ABSTRACT

A semiconductor package is disclosed that includes multiple combinations of stacked or side by side semiconductor chips, at least one of which is at least partially disposed within a through hole formed in a substrate. Another embodiment includes a package with a metal core for improving mechanical strength, heat dissipation, electrical grounding, and power distribution characteristics of the packages. The substrate may be configured to facilitate stacking additional semiconductor packages.